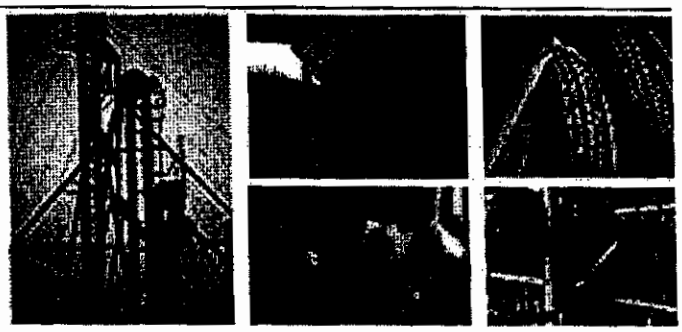
EXHIBIT F

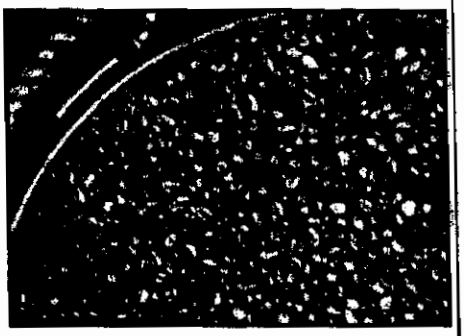
CORN REFINERS ASSOCIATION



ABOUT CRA

CORN BRIEFS

About the Association



Based in Washington, D.C., the Corn Refiners Association, Inc. is the national trade association representing the corn refining (wet milling) industry of the United States. The association, and its predecessors, have served this important segment of American agribusiness since 1913.

Through a series of operating committees of executives from corn refining firms, the association conducts programs of research and technical service, public relations and government relations for the association membership. The association is a primary source of educational material on corn and products from corn for schools, government, journalists, agriculture and agribusiness. Through assessments of the membership, the association conducts a program of sponsored research at leading universities in the corn belt and throughout the country. Technical services of the association assist the membership in meeting government regulations, in developing quality systems for use by the industry and users of products from corn and in relations with other trade and professional groups.

2005 CORN ANNUAL

The Corn Annual is the most comprehensive handbook of facts, figures and articles about corn and the corn refining industry focusing on the many ways that corn is part of our everyday lives. It is available in PDF format by clicking here.

Listen to the audio newsrelease.

Additional Web sites concerning the U.S. corn industry:

6/16/05

4/28/05

4/20/05

4/04/05

MEMBER COMPANY LINKS

Archer Daniels Midland Company

Cargill, Incorporated

Corn Products International

National Starch and Chemical Company

Penford Products Company

Roquette America, Inc.

Tate & Lyle Ingredients Americas, Inc.

IMPORTANT LINKS

HFCSFacts.com: The Truth about High Fructose Corn Syrup

National Corn Growers Association

U.S. Grains Council

National Food Processors Association

American Beverage Association

HFCSFacts.com

Facts About High Fructose Corn Syrup

CORN UTILIZATION AND TECHNOLOGY CONFERENCE SM

U.S. GRAINS COUNCIL

NATIONAL CORN GROWERS ASSOCIATION

RFA
Renewable Fuels Association

1701 Pennsylvania Avenue, Suite 950

Washington, DC 20006

Phone: (202) 331-1634
Fax: (202) 331-2054
Direct all questions to: Contact CRA

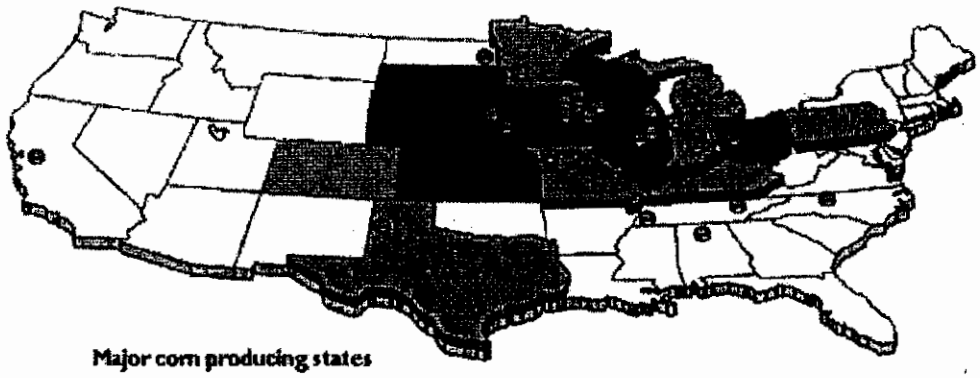
American Farm Bureau Federation

Grocery Manufacturers of America

Center for Food and Nutrition Policy

HFCS Damage Assessment

CORN REFINERS ASSOCIATION



Major corn producing states

CRA member plant locations

Member Companies

Archer Daniels Midland Company
P.O. Box 1470
Decatur, Illinois 62525
Plants: Cedar Rapids, Iowa 52404
Clinton, Iowa 52732
Columbus, Nebraska 68601
Decatur, Illinois 62525
Marshall, Minnesota 56258-2744

Cargill, Incorporated
P.O. Box 5662/MS62
Minneapolis, Minnesota 55440-5662
Plants: Blair, Nebraska 68008-2649
Cedar Rapids, Iowa 52406-2638
Dayton, Ohio 45413-8001
Decatur, Alabama 35601
Dimmitt, Texas 79027
Eddyville, Iowa 52553-5000
Hammond, Indiana 46320-1094
Memphis, Tennessee 38113-0368
Wahpeton, North Dakota 58075

Corn Products International, Inc.
5 Westbrook Corporate Center
Westchester, Illinois 60154
Plants: Bedford Park, Illinois 60501-1933

Stockton, California 95206-0129
Winston-Salem, North Carolina 27107

National Starch and Chemical Company
10 Finderne Avenue
Bridgewater, New Jersey 08807-0500
Plants: Indianapolis, Indiana 46221
North Kansas City, Missouri 64116

Penford Products Company
(A company of Penford Corporation)
P.O. Box 428
Cedar Rapids, Iowa 52406-0428
Plant: Cedar Rapids, Iowa 52404-2175

Roquette America, Inc.
1417 Exchange Street
P.O. Box 6647
Keokuk, Iowa 52632-6647
Plant: Keokuk, Iowa 52632-6647

Tate & Lyle Ingredients Americas, Inc.
P.O. Box 151
Decatur, Illinois 62525
Plants: Decatur, Illinois 62521
Lafayette, Indiana 47902
Lafayette, Indiana 47905
Loudon, Tennessee 37774

Learn more about the member companies' product lines.

Return home...

EXHIBIT G

ANALYTICAL METHODS

OF THE

MEMBER COMPANIES

OF

CORN REFINERS ASSOCIATION, INC.

Prepared by the
Quality Systems Committee

Seventh Edition

Corn Refiners Association, Inc.
1701 Pennsylvania Avenue, N. W.
Washington, D. C. 20006

FOREWORD

The Corn Refiners Association, Inc. (the "CRA", formerly Corn Industries Research Foundation, Inc.) has developed this compilation of analytical methods to assist the corn refining industry and its customers. The CRA publishes these methods as a service and emphasizes they do not in any way prescribe or restrict the internal scientific activities of any company.

A company or its personnel may or may not utilize a given standard method for their own work. Commonly understood, uniform analytical methods nevertheless serve as standardized procedures for referee purposes.

These methods also enable companies to demonstrate to the industry's customers, the general public and the government corn refiners' proficiencies in manufacturing quality products. Further, they demonstrate how this industry maintains and often sets a technological pace with or for other modern industries in the food and chemical fields.

Industry scientists, serving on the CRA Quality Systems Committee, developed these methods. Technical personnel of member companies revised and approved the methods prior to their final endorsement.

The methods detailed in this edition do not cover the entire range of the industry's products. The CRA makes no claim as to the completeness of the work. In fact, the task has no foreseeable ending, because industrial growth is bound to bring forth new products, their modifications and refinements. This volume includes common or usual methods for the analysis of corn and finished products. In time the CRA will both expand their scope to include other determinations and products obtained from corn and its derivatives, and distribute such additional methods in the form of inserts to this volume.

Many individuals in the corn refining industry contributed to the work assembled in this volume. Until 1970, Mr. Robert J. Smith, CPC International Inc., Argo, Illinois, served as chief coordinator and general editor of the methods. Since that time, an Editorial Board of the Quality Systems Committee has undertaken this work. The Association remains indebted to Mr. Smith for his planning of this volume, his guidance of the Quality Systems Committee, and his many contributions to the technology of corn refining.

Members of the Quality Systems Committee hope the publishing of these analytical methods constitutes another contribution by the corn refining industry to scientific advancement, technological development, industrial progress and the promotion of the public welfare. Toward each of those ends, the Committee would welcome comments or criticism of these methods at any time.

Audrae Erickson
President
Corn Refiners Association, Inc.

INTRODUCTION

The purpose of this introduction is to acquaint the user, especially the tyro, with the general outline of this edition, and the meaning of some of the expressions used in the different analytical methods.

In the upper left of each sheet is the commodity to which the method applies. In the upper right of each sheet is a letter-numeral combination, the letter referring to the commodity, the first number or numbers to the method, and the second (small) number to the page number of the analysis. For example, B-46-^{2} means the second page of the analytical method for phosphorus in unmodified starch. For the date the current approved method was added to this book, consult either the bottom of the first page of individual methods or the "Table of Contents."

Also at the bottom of each method's first page is a note as to the status of the method insofar as the Quality Systems Committee is concerned. "Standard" signifies that the procedure is commonly practiced by a majority of the member companies manufacturing a product to which it applies, and it has been given approval and acceptance for general use. "Tentative Standard" on the other hand recommends the use of the method when desirable or necessary, but a majority of the corn refiners do not determine the property or factor to which the method applies. The status of "Tentative Standard" suggests that alternative procedures may be employed.

The reader will observe that, in general, a basic uniform outline is followed for each method with respect to such factors as apparatus, reagents, procedures, calculations, and notes and precautions.

Throughout this compilation of methods, specific instruments and materials are occasionally mentioned for use. Mention of any brand or trade name does not constitute endorsement by the Association, neither does it imply that alternatives may not be acceptable.

SAFETY NOTE

The methods in this book are intended for use by individuals properly trained in the safe handling of chemicals and equipment in the laboratory. Therefore, there are not detailed references to all hazards associated with all materials used in the methods.

As an aid to users of the manual, the Association has compiled a listing of reagents specified for use in these methods. This listing appears as page R-1 under the Reagents and Indicators section of the manual. Certain reagents are believed by the Association to be the subject of safe handling and disposal techniques. Users are counseled to refer to supplier's Material Safety Data Sheets and/or other sources of hazard communications material for specific handling and/or disposal instructions for such reagents.

MEMBER COMPANIES

Archer Daniels Midland Company
P.O. Box 1470
Decatur, IL 62525

Plants: Cedar Rapids, IA 52404
Clinton, IA 52732
Decatur, IL 62525

Cargill, Incorporated
P.O. Box 5662/MS 62
Minneapolis, MN 55440-5662

Plants: Blair, Nebraska 68008-2649
Cedar Rapids, IA 52406-2638
Dayton, OH 45413-8001
Decatur, AL 35601
Dimmitt, TX 79027
Eddyville, IA 52553-5000
Hammond, IN 46320-1094
Memphis, TN 38113-0368
Wahpeton, ND 58075

Corn Products International, Inc.
5 Westbrook Corporate Center
Westchester, IL 60154

Plants: Bedford Park, IL 60501-1933
Stockton, CA 95206-0129
Winston-Salem, NC 27107

National Starch and Chemical Company
10 Finderne Avenue
Bridgewater, NJ 08807-0500

Plants: Indianapolis, IN 46221
North Kansas City, MO 64116

Penford Products Co.
(A company of Penford Corporation)
P.O. Box 428
Cedar Rapids, IA 52406-0428

Plant: Cedar Rapids, IA 52404-2175

Roquette America, Inc.
1417 Exchange Street
Keokuk, IA 52632-6647

Plant: Keokuk, IA 52632-6647

A. E. Staley Manufacturing Company
(A subsidiary of Tate & Lyle, PLC)
P.O. Box 151
Decatur, IL 62525

Plants: Decatur, IL 62521
Lafayette, IN 47905
Lafayette, IN 47902
Loudon, TN 37774

TABLE OF CONTENTS

AMYLOSE (Blue Value)

PRINCIPLE

Iodine complexes preferentially with the amylose (linear fraction) in corn starch. The starch sample (defatting is optional) is dispersed in alkali and neutralized. An excess of standard iodine solution is added and the resulting stable blue complex is measured spectrophotometrically. Amylose content is estimated by reference to a calibration plot, prepared with the aid of defatted starches having known amylose contents (Note 1).

SCOPE

This method is applicable to unmodified corn starches.

SPECIAL APPARATUS

Spectrophotometer: An instrument having a continuously-variable wavelength control in the visible region, with matching 1.0 cm cuvets, is recommended.

REAGENTS

1. Iodine Solution, 0.20%: Dissolve 20.0 g of reagent grade potassium iodide (KI) in 200 mL of purified water in a 1 L volumetric flask. Add 2.000 g of resublimed iodine (I_2) and stir. When the iodine is dissolved completely, dilute to volume with purified water and mix. Store in a nonactinic bottle.

   Iodine solution prepared in this manner will contain exactly 2.00 mg iodine per mL and is stable for long periods. Standardize the solution occasionally against National Institute of Standards and Technology arsenious oxide. When iodine concentration falls below 1.98 mg per mL, discard and prepare fresh reagent.

2. Sodium Hydroxide Solution, 1 *N*: Standard

3. Hydrochloric Acid Solution, 0.1 *N*: Standard

AMYLOSE (Blue Value) — continued

4. Ethyl Alcohol: Absolute

5. Phenolphthalein Indicator, 0.1%

PROCEDURE

Sample Analysis: Grind sample to eliminate hard or coarse particles, blend and determine moisture content by an approved method. Defatted samples usually provide more accurate data, and defatting, if desired, can be accomplished rapidly and efficently by extracting with a mixed solvent composed of methanol and dimethylsulfoxide (Note 2).

Weigh a starch sample containing 100.0 ± 0.1 mg of dry substance and transfer quantitatively to a 100 mL volumetric flask. Add 1 mL of ethyl alcohol and swirl to disperse the ethanol. Add 10.0 mL of 1 *N* sodium hydroxide solution and again swirl to disperse sample. Allow dispersion to stand until sample is completely gelatinized (about 1 hr.). The mixture must be smooth and free of lumps. Dilute to volume with purified water and mix.

Pipet 2.50 mL of this solution into a 100 mL volumetric flask and add 50 mL of purified water. Add 2 drops of phenolphthalein indicator and titrate with 0.1 *N* hydrochloric acid solution from a buret until the pink indicator color just disappears. Add 2.0 mL of 0.20% iodine solution, dilute to volume with purified water, mix and let stand 30 mins.

Prepare a reference solution (blank) by diluting 2.0 mL of 0.20% iodine solution to 100 mL volume with purified water and mix before use. Fill one of two 1 cm matching cuvets with the reference solution and fill the other with the sample solution. Determine absorbance of sample solution at 620 nm against the reference solution.

Standardization: Calibration data are obtained by similar analysis of defatted, unmodified starches. Amylose contents of the starches used for standardization should range from 0% (waxy maize) to 75% (high-amylose maize) as determined by Method B-28, Iodine Affinity, in this manual. Defatting the standards may be accomplished either according to the procedure described in Method B-28 or by the methanol-dimethylsulfoxide mixed solvent procedure described in Note 2.

AMYLOSE (Blue Value) — continued

Process the defatted starch standards by the procedure described earlier under "Sample Analysis." Determine absorbance of the standard sample solutions against the reference solution at 620 nm in 1.0 cm matching cuvets. Plot absorbance versus amylose content for the starch standards.

CALCULATION

Defatted Samples:

Amylose Content, % = % Amylose (From Graph)

Nondefatted Samples (Note 3):

Amylose Content, % = Amylose (From Graph × 1.06

NOTES AND PRECAUTIONS

1. This method is similar to that described by G. A. Gilbert and S. P. Spragg, *Methods in Carbohydrate Chemistry*, Vol. 4, p. 168 (R. L. Whistler, Ed., Academic Press, New York, 1964).

2. Samples and standard starches may be defatted by the following procedure. Place 10 to 11 g of starch sample in a 250 mL Erlenmeyer flask equipped with a T 24/40 round glass joint. Insert a stirring bar, add 30 mL of anhydrous methanol and 20 mL of anhydrous dimethylsulfoxide. Place flask on a magnetic stirring hot plate and attach a water-cooled condenser. Stir at a moderate rate; bring sample-solvent mixture to reflux temperature and reflux for 30 mins.

   Transfer hot mixture to medium-porosity, sintered-glass Büchner funnel and recover starch by vacuum filtration. Rinse flask into funnel with anhydrous methanol from a wash bottle, and wash starch with an additional 50 mL of anhydrous methanol; maintain vacuum until excess solvent is removed.

   Reslurry filter cake in hot anhydrous methanol and repeat washing step above.

AMYLOSE (Blue Value) — continued

Transfer extracted starch sample to a watch glass or Petri dish and at room temperature air-dry overnight.

3. The correction factor, 1.06, is a typical value. Laboratories wishing to apply this method to nondefatted samples should develop their own correction factor.